



APD01_3.ST25
SEQUENCE LISTING

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<120> TARGET DETECTION SYSTEM HAVING A CONFORMATIONALLY SENSITIVE PROBE
COMPRISING A NUCLEIC ACID BASED SIGNAL TRANSDUCER

<130> 58248-CIP (47606)

<140> US 10/684,346

<141> 2003-10-11

<150> US 60/417,864

<151> 2002-10-11

<150> US 10/684,230

<151> 2003-10-10

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 <213> Schistoma

<220>
 <221> MISC_FEATURE
 <222> (1)..(8)
 <223> Cathepsin cleavage site

<300>
 <308> GenBank/NM_000558
 <309> 2003-10-04
 <313> (34)..(41)

<400> 82

Phe Leu Ser Phe Pro Thr Thr Lys
 1 5

<210> 83
 <211> 8
 <212> PRT
 <213> Schistoma

<220>
 <221> MISC_FEATURE
 <222> (1)..(8)
 <223> Cathepsin cleavage site

<400> 83

Thr Pro Glu Glu Lys Ala Ser Val
 1 5

<210> 84

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<211> 8
<212> PRT
<213> Schistoma

<220>
<221> MISC_FEATURE
<222> (1)..(8)
<223> Cathepsin cleavage site

<400> 84

Val Thr Ala Leu Trp Glu Lys Val
1 5

<210> 85
<211> 8
<212> PRT
<213> Schistoma

<220>
<221> MISC_FEATURE
<222> (1)..(8)
<223> Cathepsin cleavage site

<400> 85

Leu Gly Arg Leu Leu Leu Val Val
1 5

<210> 86
<211> 11
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(11)
<223> CAMP-dependent protein Kinase phosphorylation site

<400> 86

Tyr Leu Arg Arg Ala Ser Leu Ala Gln Leu Thr
1 5 10

<210> 87
<211> 8
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(8)
<223> CAMP-dependent protein Kinase phosphorylation site

<400> 87

Phe Arg Arg Leu Ser Ile Ser Thr
1 5

<210> 88
<211> 11
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(11)
<223> CAMP-dependent protein kinase phosphorylation site

<400> 88

Ala Gly Ala Arg Arg Lys Ala Ser Gly Pro Pro
1 5 10

<210> 89
<211> 8
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(8)
<223> CAMP-dependent protein kinase phosphorylation site

<400> 89

Gly Arg Gly Leu Ser Leu Ser Arg
1 5

<210> 90
<211> 11
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(11)
<223> Casein Kinase I phosphorylation site; Ser (location:4)
phosphorylated

<400> 90

Arg Thr Leu Ser Val Ser Ser Leu Pro Gly Leu
1 5 10

<210> 91
<211> 10
<212> PRT
<213> mammalian

<220>

<221> MISC_FEATURE
 <222> (1)..(10)
 <223> Casein Kinase I phosphorylation site; Ser (location:4 and 6)
 phosphorylated

<400> 91

Asp Ile Gly Ser Glu Ser Thr Glu Asp Gln
 1 5 10

<210> 92
 <211> 10
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(10)
 <223> Casein Kinase II phosphorylation site

<400> 92

Ala Asp Ser Glu Ser Glu Asp Glu Glu Asp
 1 5 10

<210> 93
 <211> 11
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(11)
 <223> Casein Kinase II phosphorylation site

<400> 93

Leu Glu Ser Glu Glu Glu Gly Val Pro Ser Thr
 1 5 10

<210> 94
 <211> 11
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(11)
 <223> Casein Kinase II phosphorylation site

<400> 94

Glu Asp Asn Ser Glu Asp Glu Ile Ser Asn Leu
 1 5 10

<210> 95

<211> 9
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(9)
 <223> Glycogen Synthase Kinase 3 phosphorylation site: Ser (location:9)
 phosphorylated

<400> 95

Ser Val Pro Pro Ser Pro Ser Leu Ser
 1 5

<210> 96
 <211> 9
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(9)
 <223> Glycogen synthase Kinase 3 phosphorylation site: Ser (location: 5
 and 9) phosphorylated

<400> 96

Ser Val Pro Pro Ser Pro Ser Leu Ser
 1 5

<210> 97
 <211> 7
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(7)
 <223> Cdc2 protein Kinase phosphorylation site

<400> 97

Pro Ala Lys Thr Pro Val Lys
 1 5

<210> 98
 <211> 10
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(10)
 <223> Cdc2 protein Kinase phosphorylation site

<400> 98

His Ser Thr Pro Pro Lys Lys Lys Arg Lys
 1 5 10

<210> 99

<211> 11

<212> PRT

<213> mammalian

<220>

<221> MISC_FEATURE

<222> (1)..(11)

<223> Calmodulin-dependent protein Kinase II phosphorylation site

<400> 99

Asn Tyr Leu Arg Arg Arg Leu Ser Asp Ser Asn
 1 5 10

<210> 100

<211> 10

<212> PRT

<213> mammalian

<220>

<221> MISC_FEATURE

<222> (1)..(10)

<223> Calmodulin-dependent protein Kinase II phosphorylation site

<400> 100

Lys Met Ala Arg Val Phe Ser Val Leu Arg
 1 5 10

<210> 101

<211> 13

<212> PRT

<213> mammalian

<220>

<221> MISC_FEATURE

<222> (1)..(13)

<223> Insulin receptor phosphorylation site

<400> 101

Arg Arg Leu Ile Glu Asp Ala Glu Tyr Ala Ala Arg Gly
 1 5 10

<210> 102

<211> 4

<212> PRT

<213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(4)
 <223> Mitogen-activated protein Kinase (Extracellular Signal-regulated Kinase) phosphorylation site

<400> 102

Pro Leu Ser Pro
 1

<210> 103
 <211> 4
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(4)
 <223> Mitogen-activated protein Kinase (Extracellular Signal-regulated Kinase) phosphorylation site

<400> 103

Pro Ser Ser Pro
 1

<210> 104
 <211> 4
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(4)
 <223> Mitogen-activated protein Kinase (Extracellular Signal-regulated Kinase) phosphorylation site

<400> 104

Val Leu Ser Pro
 1

<210> 105
 <211> 21
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(21)
 <223> Mitogen-activated protein Kinase (Extracellular Signal-regulated Kinase) phosphorylation site

<400> 105

Lys Arg Glu Leu Val Glu Pro Leu Thr Pro Ser Gly Glu Ala Pro Asn

1 5 APD01_3.ST25 15
10

Gln Ala Leu Leu Arg
20

<210> 106
<211> 11
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(11)
<223> cGMP-dependent protein kinase phosphorylation site

<400> 106

Gly Lys Lys Arg Lys Arg Ser Arg Lys Glu Ser
1 5 10

<210> 107
<211> 8
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(8)
<223> cGMP-dependent protein kinase phosphorylation site

<400> 107

Phe Arg Arg Leu Ser Ile Ser Thr
1 5

<210> 108
<211> 7
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(7)
<223> cGMP-dependent protein kinase phosphorylation site

<400> 108

Arg Lys Arg Ser Arg Ala Glu
1 5

<210> 109
<211> 12
<212> PRT
<213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(12)
 <223> Phosphorylase Kinase phosphorylation site

<400> 109

Asp Gln Glu Lys Arg Lys Gln Ile Ser Val Arg Gly
 1 5 10

<210> 110
 <211> 10
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(10)
 <223> Phosphorylase Kinase phosphorylation site

<400> 110

Pro Leu Ser Arg Thr Leu Ser Val Ser Ser
 1 5 10

<210> 111
 <211> 9
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(9)
 <223> Protein Kinase C phosphorylation site

<400> 111

His Glu Gly Thr His Ser Thr Lys Arg
 1 5

<210> 112
 <211> 10
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(10)
 <223> Protein Kinase C phosphorylation site

<400> 112

Pro Leu Ser Arg Thr Leu Ser Val Ser Ser
 1 5 10

<210> 113
 <211> 11
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(11)
 <223> Protein Kinase C phosphorylation site

<400> 113

Gln Lys Arg Pro Ser Gln Arg Ser Lys Tyr Leu
 1 5 10

<210> 114
 <211> 12
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(12)
 <223> Protein Kinase C phosphorylation site

<400> 114

Pro Leu Ser Arg Thr Leu Ser Val Ala Ala Lys Lys
 1 5 10

<210> 115
 <211> 7
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(7)
 <223> Protein Kinase C phosphorylation site

<400> 115

Leu Lys Phe Ser Lys Lys Phe
 1 5

<210> 116
 <211> 8
 <212> PRT
 <213> mammalian

<220>
 <221> MISC_FEATURE
 <222> (1)..(8)
 <223> Protein Kinase C phosphorylation site

<400> 116

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Arg Lys Arg Thr Leu Arg Arg Leu
1 5

<210> 117
<211> 21
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(21)
<223> p34 cdc2 protein Kinase phosphorylation site

<400> 117

Ala Lys Ala Gln His Ala Thr Pro Pro Lys Lys Lys Arg Lys Val Glu
1 5 10 15

Asp Pro Lys Asp Phe
20

<210> 118
<211> 9
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(9)
<223> Meiosis-activated myelin basic protein Kinase phosphorylation site

<400> 118

Ala Pro Arg Thr Pro Gly Gly Arg Arg
1 5

<210> 119
<211> 11
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(11)
<223> Smooth Muscle Myosin Light Chain Kinase phosphorylation site

<400> 119

Lys Lys Arg Ala Arg Thr Ser Asn Val Phe Ala
1 5 10

<210> 120
<211> 11

APD01_3.ST25

<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(11)
<223> Epidermal Growth Factor Receptor Kinase phosphorylation site
<400> 120

Arg Glu Asn Ala Glu Tyr Leu Arg Val Ala Pro
1 5 10

<210> 121
<211> 10
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(10)
<223> Epidermal Growth Factor Receptor Kinase phosphorylation site
<400> 121

Ala Glu Pro Asp Tyr Gly Ala Leu Tyr Glu
1 5 10

<210> 122
<211> 5
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(5)
<223> Protein Tyrosine Kinase pp60c-src phosphorylation site
<400> 122

Ile Tyr Gly Glu Phe
1 5

<210> 123
<211> 52
<212> DNA
<213> Artificial

<220>
<223> Synthetic Sequence

<220>
<221> modified_base
<222> (39)..(39)
<223> The 39th nucleotide t is linked to biotin by a linker.

APD01_3.ST25

<400> 123
atggaagtat atggaagtat atggaagtat tcgtgggggtt ttgcagtcgt ag 52

<210> 124
<211> 14
<212> DNA
<213> Artificial

<220>
<223> Synthetic Sequence

<220>
<221> modified_base
<222> (1)..(1)
<223> The first nucleotide g is linked to fluorescein by a linker.

<400> 124
gactgcaaaa cccc 14

<210> 125
<211> 52
<212> DNA
<213> Artificial

<220>
<223> Synthetic Sequence

<220>
<221> misc_feature
<222> (39)..(39)
<223> The 39th nucleotide n is an abasic nucleotide,
6-amino-2-hydroxymethyl hexanol linked to biotin.

<400> 125
atggaagtat atggaagtat atggaagtat tcgtgggggnt ttgcagtcgt ag 52

<210> 126
<211> 16
<212> DNA
<213> Artificial

<220>
<223> Synthetic Sequence

<220>
<221> modified_base
<222> (1)..(1)
<223> The first nucleotide g is linked to fluorescein by a linker.

<400> 126
gactgcaaaa ccccac 16

<210> 127
<211> 36
<212> DNA
<213> Artificial

<220>
<223> Synthetic Sequence

<220>
<221> modified_base
<222> (1)..(36)
<223> The first nucleotide g is linked to fluorescein by a linker.
The 34th nucleotide t is linked to biotin by a linker. The last
(36th) nucleotide c is linked to DABCYL
(4-(4'-dimethylaminophenylazo)benzoic acid) by a linker.

<220>
<221> stem_loop
<222> (1)..(36)

<400> 127
gcagcctagg aaacaccaa gatgatattt ggctgc 36

<210> 128
<211> 38
<212> DNA
<213> Artificial

<220>
<223> Synthetic Sequence

<220>
<221> modified_base
<222> (1)..(38)
<223> The first nucleotide g is linked to fluorescein by a linker. The
6th and 36th nucleotides t are linked to biotin by a linker. The
last (38th) nucleotide c is linked to DABCYL
(4-(4'-dimethylaminophenylazo)benzoic acid) by a linker.

<220>
<221> stem_loop
<222> (1)..(38)

<400> 128
gcagctctag gaaacaccaa agatgatatt tgagctgc 38

<210> 129
<211> 30
<212> DNA
<213> Artificial

<220>
<223> Synthetic Sequence

<400> 129
aaatatcatc tttggtgttt cctaggctgc 30

<210> 130
<211> 14
<212> DNA
<213> Artificial

<220>
 <223> Synthetic Sequence

<400> 130
 gactgcaaaa cccc 14

<210> 131
 <211> 12
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic Sequence

<220>
 <221> modified_base
 <222> (1)..(1)
 <223> The first nucleotide c is linked to fluorescein by a linker.

<400> 131
 ctacgactgc aa 12

<210> 132
 <211> 52
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic Sequence

<400> 132
 atggaagtat atggaagtat atggaagtat tcgtgggggtt ttgcagtcgt ag 52

<210> 133
 <211> 14
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic Sequence

<220>
 <221> modified_base
 <222> (4)..(4)
 <223> The 4th nucleotide t is linked to biotin by a linker.

<400> 133
 gactgcaaaa cccc 14

<210> 134
 <211> 16
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic Sequence

<400> 134
gactgcaaaa cccac

16

<210> 135
<211> 52
<212> DNA
<213> Artificial

<220>
<223> Synthetic Sequence

<220>
<221> modified_base
<222> (1)..(1)
<223> The first nucleotide a is linked to biotin by a linker.

<400> 135
atggaagtat atggaagtat atggaagtat tcgtgggggtt ttgcagtcgt ag

52

<210> 136
<211> 16
<212> DNA
<213> Artificial

<220>
<223> Synthetic Sequence

<220>
<221> modified_base
<222> (4)..(4)
<223> The 4th nucleotide t is linked to biotin by a linker.

<400> 136
gactgcaaaa cccac

16

<210> 137
<211> 52
<212> DNA
<213> Artificial

<220>
<223> Synthetic Sequence

<220>
<221> modified_base
<222> (1)..(1)
<223> The first nucleotide a is linked to biotin by a linker.

<220>
<221> misc_feature
<222> (39)..(39)
<223> The 39th nucleotide n is an abasic nucleotide,
6-amino-2-hydroxymethyl hexanol linked to digoxigenin.

<400> 137
atggaagtat atggaagtat atggaagtat tcgtggggnt ttgcagtcgt ag

52

<210> 138
 <211> 14
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(14)
 <223> The 12nd nucleotide t is linked to biotin by a linker.

<220>
 <221> stem_loop
 <222> (1)..(14)

<400> 138
 gcaggactac ctgc

14

<210> 139
 <211> 16
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(16)
 <223> The 14th nucleotide t is linked to biotin by a linker.

<220>
 <221> stem_loop
 <222> (1)..(16)

<400> 139
 gcaggacttt acctgc

16

<210> 140
 <211> 18
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(18)
 <223> The 16th nucleotide t is linked to biotin by a linker.

<220>
 <221> stem_loop
 <222> (1)..(18)

<400> 140
gcaggactca ttacctgc

18

<210> 141
<211> 25
<212> DNA
<213> Artificial

<220>
<223> Synthetic sequence

<220>
<221> modified_base
<222> (1)..(25)
<223> The 23rd nucleotide t is linked to biotin by a linker.

<220>
<221> stem_loop
<222> (1)..(25)

<400> 141
gcaggatact cattaccata cctgc

25

<210> 142
<211> 35
<212> DNA
<213> Artificial

<220>
<223> Synthetic sequence

<220>
<221> modified_base
<222> (1)..(35)
<223> The 33rd nucleotide t is linked to biotin by a linker.

<220>
<221> stem_loop
<222> (1)..(35)

<400> 142
gcaggatact cattagcgac gaacaccata cctgc

35

<210> 143
<211> 45
<212> DNA
<213> Artificial

<220>
<223> Synthetic sequence

<220>
<221> modified_base
<222> (1)..(45)
<223> The 43rd nucleotide t is linked to biotin by a linker.

<220>

<221> stem_loop
<222> (1)..(45)

<400> 143
gcaggatact tagaccaaca cattagcgac gaacaccata cctgc

45

<210> 144
<211> 25
<212> DNA
<213> Artificial

<220>
<223> Synthetic sequence

<220>
<221> modified_base
<222> (1)..(25)
<223> The 23rd nucleotide t is linked to biotin by a linker.

<220>
<221> stem_loop
<222> (1)..(25)

<400> 144
cgaccatcct cattaccata ggtcg

25

<210> 145
<211> 25
<212> DNA
<213> Artificial

<220>
<223> Synthetic sequence

<220>
<221> modified_base
<222> (1)..(25)
<223> The 23rd nucleotide t is linked to biotin by a linker.

<220>
<221> stem_loop
<222> (1)..(25)

<400> 145
gcagcatcct cattacccta gctgc

25

<210> 146
<211> 25
<212> DNA
<213> Artificial

<220>
<223> Synthetic sequence

<220>
<221> modified_base
<222> (1)..(25)

<223> The 23rd nucleotide t is linked to biotin by a linker.

<220>

<221> stem_loop

<222> (1)..(25)

<400> 146

cgacgacacct cattaccata cgtcg

25

<210> 147

<211> 25

<212> DNA

<213> Artificial

<220>

<223> Synthetic sequence

<220>

<221> modified_base

<222> (1)..(25)

<223> The 23rd nucleotide t is linked to biotin by a linker.

<220>

<221> stem_loop

<222> (1)..(25)

<400> 147

ggaggataat cattaccata cctcc

25

<210> 148

<211> 25

<212> DNA

<213> Artificial

<220>

<223> Synthetic sequence

<220>

<221> modified_base

<222> (1)..(25)

<223> The 23rd nucleotide t is linked to biotin by a linker.

<220>

<221> stem_loop

<222> (1)..(25)

<400> 148

ccaccatact cattacccta ggtgg

25

<210> 149

<211> 23

<212> DNA

<213> Artificial

<220>

<223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(23)
 <223> The 21st nucleotide t is linked to biotin by a linker.

<220>
 <221> stem_loop
 <222> (1)..(23)

<400> 149
 gcagatactc attaccatac tgc

23

<210> 150
 <211> 25
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(25)
 <223> The 23rd nucleotide t is linked to biotin by a linker.

<220>
 <221> stem_loop
 <222> (1)..(25)

<400> 150
 gcaggatact gcttaccata cctgc

25

<210> 151
 <211> 25
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(25)
 <223> The 23rd nucleotide t is linked to biotin by a linker.

<220>
 <221> stem_loop
 <222> (1)..(25)

<400> 151
 gcaggactct cattacactg cctgc

25

<210> 152
 <211> 25
 <212> DNA
 <213> Artificial

<220>

<223> Synthetic sequence

<220>

<221> modified_base

<222> (25)..(25)

<223> The 25th nucleotide t is linked to biotin by a linker.

<400> 152

agcgcatcct cattacccta gcgct

25

<210> 153

<211> 25

<212> DNA

<213> Artificial

<220>

<223> Synthetic sequence

<220>

<221> modified_base

<222> (1)..(25)

<223> The 21st nucleotide t is linked to biotin by a linker.

<220>

<221> stem_loop

<222> (1)..(25)

<400> 153

gcgcaatcct cattacccta tgcgc

25

<210> 154

<211> 25

<212> DNA

<213> Artificial

<220>

<223> Synthetic sequence

<220>

<221> modified_base

<222> (1)..(25)

<223> The 19th nucleotide t is linked to biotin by a linker.

<220>

<221> stem_loop

<222> (1)..(25)

<400> 154

gcagcatcct cattacccta gctgc

25

<210> 155

<211> 25

<212> DNA

<213> Artificial

<220>

<223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(25)
 <223> The 13rd nucleotide t is linked to biotin by a linker.

<220>
 <221> stem_loop
 <222> (1)..(25)

<400> 155
 gcagcatcct cattacccta gctgc 25

<210> 156
 <211> 25
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(25)
 <223> The 10th nucleotide t is linked to biotin by a linker.

<220>
 <221> stem_loop
 <222> (1)..(25)

<400> 156
 gcagcatcct cattacccta gctgc 25

<210> 157
 <211> 25
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(25)
 <223> The first nucleotide g is linked to fluorescein by a linker. The
 last (25th) nucleotide c is linked to DABCYL
 (4-(4'-dimethylaminophenylazo)benzoic acid) by a linker.

<220>
 <221> stem_loop
 <222> (1)..(25)

<400> 157
 gcagctagga gtaatgggat gctgc 25

<210> 158
 <211> 15

<212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (11)..(11)
 <223> The 11st nucleotide t is linked to biotin by a linker.

<400> 158
 atccattac tccta 15

<210> 159
 <211> 13
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (11)..(11)
 <223> The 11st nucleotide t is linked to biotin by a linker.

<400> 159
 atccattac tcc 13

<210> 160
 <211> 15
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<400> 160
 tagggtaatg aggat 15

<210> 161
 <211> 25
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(25)
 <223> The 23rd nucleotide t is linked to carboxyl group by a linker.

<220>
 <221> stem_loop
 <222> (1)..(25)

<400> 161
gcagcatcct cattacccta gctgc

25

<210> 162
<211> 25
<212> DNA
<213> Artificial

<220>
<223> synthetic sequence

<220>
<221> modified_base
<222> (1)..(25)
<223> The 23rd nucleotide t is linked to amine group by a linker.

<220>
<221> stem_loop
<222> (1)..(25)

<400> 162
gcagcatcct cattacccta gctgc

25

<210> 163
<211> 7
<212> PRT
<213> Artificial

<220>
<223> Synthetic sequence

<220>
<221> MISC_FEATURE
<222> (1)..(7)
<223> Protein Kinase C phosphorylation site

<400> 163

Lys Arg Thr Leu Arg Arg Cys
1 5

<210> 164
<211> 6
<212> PRT
<213> mammalian

<220>
<221> MISC_FEATURE
<222> (1)..(6)
<223> Protein Kinase C phosphorylation site

<400> 164

Lys Arg Thr Leu Arg Arg
1 5

<210> 165
 <211> 25
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(25)
 <223> The 23rd nucleotide t is linked to phosphorylated heptapeptide, KRpTLRRC, by a linker.

<220>
 <221> stem_loop
 <222> (1)..(25)

<400> 165
 gcagcatcct cattacccta gctgc

25

<210> 166
 <211> 7
 <212> PRT
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> MISC_FEATURE
 <222> (3)..(3)
 <223> The 3rd amino acid T is phosphorylated.

<400> 166

Lys Arg Thr Leu Arg Arg Cys
 1 5

<210> 167
 <211> 25
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic sequence

<220>
 <221> modified_base
 <222> (1)..(25)
 <223> The 23rd nucleotide t is linked to the heptapeptide, KRpTLRRC, by a linker.

<220>
 <221> stem_loop
 <222> (1)..(25)

<400> 167
gcagcatcct cattacccta gctgc

25